Express Mail Label No.: E 39504470US Date of Deposit: January 22, 2003

PATENT APPLICATION

Attorney Docket No. 21402-230 (CURA-530)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANTS:

Spytek, et al.

SERIAL NUMBER:

10/038,854

Examiner:

Not Yet Assigned

FILING DATE:

December 31, 2001

ART UNIT: 1616

For:

PROTEINS AND NUCLEIC ACIDS ENCODING SAME

BOX SEQUENCE

U.S. Patent and Trademark Office P.O. Box 2327 Arlington, VA 22202

RESPONSE TO NOTICE TO COMPLY WITH SEQUENCE LISTING REQUIREMENT UNDER 37 CFR §§ 1.821 - 1.825

In response to the Notice To Comply with Sequence Listing Requirements mailed November 22, 2002, Applicants submit herein, a copy of the Notice to Comply with Requirements for Patent Applications Containing Nucleotide Sequence and/or Amino Acid Sequence Disclosures, a computer readable form (CFR) copy of the "Sequence Listing", and a statement that the content of the paper and computer readable copies are the same and include no new matter, in compliance with 37 C.F.R. §§ 1.821-1.825. Applicants note that a paper copy of the "Sequence Listing" was previously submitted on October 15, 2002. Applicants believe that no fees are due, however the Commissioner is authorized to charge any fees that may be due, or credit any overpayment of same, to Deposit Account No. 50-0311, Attorney Ref. No. 21402-230 (CURA-530).

Respectfully submitted,

Dated: January 22, 2003

Iyor R. Elrifi, Reg. No. 39. Janine M. Susan, Reg. No. 46,119 MINTZ, LEVIN, COHN, FERRIS, GLOVSKY and POPEO, P.C.

One Financial Center

Boston, Massachusetts 02111

Tel: (617) 542-6000 Fax: (617) 542-2241 Express Mail Label No.: EV139504470US Date of Deposit: January 22, 2003

Attorney Docket No. 21402-230 (CURA-530)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANTS:

Spytek, et al.

SERIAL NUMBER:

10/038,854

EXAMINER:

Not Yet Assigned

FILING DATE:

December 31, 2001

ART UNIT:

1616

FOR:

Proteins and Nucleic Acids Encoding Same

Box Sequence

U.S. Patent and Trademark Office

P.O. Box 2327

Arlington, VA 22202



STATEMENT IN SUPPORT OF COMPUTER READABLE FORM SUBMISSION UNDER 37 C.F.R. § 1.821(f)

I hereby state that the content of the paper and computer readable forms of the Sequence Listing, submitted in the above-identified application in accordance with 37 C.F.R. § 1.821(c) and 1.821(e), respectively, are the same. No new matter is added.

Respectfully submitted,

Dated: January 22, 2003

Janine M. Susan, Reg. No. 46

Attorney for Applicants c/o Mintz, Levin

One Financial Center Boston, MA 02111

Telephone (617) 542 6000

Fax: (617) 542 2241

TRA 1755516v1

OIPE

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/038,854

DATE: 01/30/2003 TIME: 09:56:50

Input Set : A:\Cura-530.app

Output Set: N:\CRF4\01302003\J038854.raw

```
3 <110> APPLICANT: Spytek, Kimberly A
              Li, Li
              Wolenc, Adam R
      5
              Vernet, Corine
              Eisen, Andrew J
      7
      8
              Liu, Xiaohong
      9
              Malyankar, Uriel M
             Shimkets, Richard A
     10
              Tchernev, Velizar
     11
     12
              Spaderna, Steven K
     13
              Gorman, Linda
             Kekuda, Ramesh
     14
              Patturajan, Meera
     15
              Gusev, Vladimir Y
     16
     17
              Gangolli, Esha A
     18
              Guo, Xiaojia S
     19
              Shenoy, Suresh G
     20
              Rastelli, Luca
                                                             ENTERED
     21
              Casman, Stacie J
     2.2
              Boldog, Ferenc
     23
              Burgess, Catherine E
              Edinger, Shlomit R
     24
     25
              Ellerman, Karen
     26
              Gunther, Erik
     27
              Smithson, Glennda
     28
             Millet, Isabelle
     29
             MacDougall, John R
     31 <120> TITLE OF INVENTION: Proteins and Nucleic Acids Encoding Same
     33 <130> FILE REFERENCE: 21402-230
     35 <140> CURRENT APPLICATION NUMBER: 10/038,854
C--> 36 <141> CURRENT FILING DATE: 2003-01-22
     38 <150> PRIOR APPLICATION NUMBER: 60/258,928
     39 <151> PRIOR FILING DATE: 2000-12-29
     41 <150> PRIOR APPLICATION NUMBER: 60/259,415
     42 <151> PRIOR FILING DATE: 2001-01-02
     44 <150> PRIOR APPLICATION NUMBER: 60/259,785
     45 <151> PRIOR FILING DATE: 2001-01-04
     47 <150> FRIOR APPLICATION NUMBER: 60/269,814
     48 <151> PRIOR FILING DATE: 2001-02-20
```

50 <1560 PRIOR APPLICATION NUMBER: 60/279,832 51 <151> PRIOR FILING DATE: 2001-03-29 53 -150 PRIOR APPLICATION NUMBER: 60/279,833 54 <151 PRIOR FILING DATE: 2001-63-29

PATENT APPLICATION: US/10/038,854

DATE: 01/30/2003 TIME: 09:56:50

Input Set : A:\Cura-530.app

Output Set: N:\CRF4\01302003\J038854.raw

```
56 <150> PRIOR APPLICATION NUMBER: 60/279,863
57 <151> PRIOR FILING DATE: 2001-03-29
59 <150> PRIOR APPLICATION NUMBER: 60/283,889
60 <151> PRIOR FILING DATE: 2001+04-13
62 <150> PRIOR APPLICATION NUMBER: 60/284,447
63 <151> PRIOR FILING DATE: 2001-04-18
65 <150> PRIOR APPLICATION NUMBER: 60/286,683
66 <151> PRIOR FILING DATE: 2001-04-25
68 <150> PRIOR APPLICATION NUMBER: 60/294,080
69 <151> PRIOR FILING DATE: 2001-05-29
71 <150> PRIOR APPLICATION NUMBER: 60/312,915
72 <151> PRIOR FILING DATE: 2001-08-16
74 <150> PRIOR APPLICATION NUMBER: 60/313,325
75 <151> PRIOR FILING DATE: 2001-08-17
77 <150> PRIOR APPLICATION NUMBER: 60/322,699
78 <151> PRIOR FILING DATE: 2001-09-17
80 <160> NUMBER OF SEQ ID NOS: 411
82 <170> SOFTWARE: PatentIn Ver. 2.1
84 <210> SEQ ID NO: 1
85 <211> LENGTH: 1138
86 <212> TYPE: DNA
87 <213> ORGANISM: Homo sapiens
89 <400> SEQUENCE: 1
90 gtccaaaatg tggctgcttt taacaacaac ttgtttgatc tgtggaactt taaatgctgg 60
91 tggattcctt gatttggaaa atgaagtgaa tcctgaggtg tggatgaata ctagtgaaat 120
92 catcatetae aatggetaee eeagtgaaga gtatgaagte accaetgaag atgggtatat 180
93 acteettyte aacaqaatte ettatyygeg aacacatget aggageacag gteeceggee 240
94 agttqtqtat atqcaqcatq ccctqtttgc agacaatgcc tactggcttg agaattatgc 300
95 taatggaage ettggattee ttetageaga tgeaggttat gatgtatgga tgggaaacag 360
96 toqqqqaaac acttqqtcaa gaaqacacaa aacactctca gagacagatq agaaattctq 420
97 ggcctttggt tittgatgaaa tggccaaata tgatctccca ggagtaatag acticatigt 480
98 aaataaaact ggtcaggaga aattgtattt cattggacat tcacttggca ctacaatagg 540
99 gtttgtaged ttttccacca tgcctgaact ggcacaaaga atcaaaatga attttgcctt 600
100 gggtectacg atotoattca aatateeeac gggeattttt accaggttit ttetacttee 660
101 aaattooata atcaaggotg tttttggtac caaaggtttc tttttagaag ataagaaaac 720
102 gaagataget tetaceaaaa tetgeaacaa taagatacte tggttgatat gtagegaatt 780
103 tatgteetta tgggetggat ecaacaagaa aaatatgaat eagetttaee aetetgatga 840
104 att.caqaqct tatqactggg gaaatgacgc tgataatatg aaacattaca atcagagtca 900
105 tecccetata tatgacetga etgecatgaa agtgeetaet getatttggg etggtggaca 960
106 tgatqtcctc qtaacacccc aggatqtggc caggatactc cctcaaatca agagtcttca 1020
107 ttactttaag ctattgccag attggaacca ctttgatttt gtctggggcc tcgatgcccc 1080
108 tcaacqqatq tacaqtqaaa tcataqcttt aatqaaqqca tatteetaaa tgcaatqc = 1138
111 <210> SEO ID NO: 2
112 <211> LENGTH: 373
113 <212> TYPE: PRT
114 <213> ORGANISM: Homo sapiens
116 <400> SEQUENCE: 2
117 Met Trp Leu Leu Thr Thr Thr Cys Leu Ile Cys Gly Thr Leu Asn
118 1
                                        1.6
```

PATENT APPLICATION: US/10/038,854

DATE: 01/30/2003 TIME: 09:56:50

Input Set : A:\Cura-530.app

Output Set: N:\CRF4\01302003\J038854.raw

120 121	Ala	Gly	Gly	Phe 20	Leu	Asp	Leu	Glu	Asn 25	Glu	Väl	Asn	Pro	Glu 30	Val	Trp
	Met	Asn	Thr 35	Ser	Glu	Ile	Ile	Ile 40	Tyr	Asn	Gly	Tyr	Pro 45	Ser	Glu	Glu
	Tyr	Glu 50		Thr	Thr	Glu	Asp 55			lle	Leu	Leu 60	Val	Asn	Arg	Ile
129 130	Pro 65		Gly	Arg	Thr	His 70	Ala	Arg	Ser	Thr	Gly 75	Pro	Arg	Pro	Val	Val 80
132 133	Туг	Met	Gln	His	Ala 85	Leu	Phe	Ala	Asp	Asn 90	Ala	Tyr	Trp	Leu	Glu 95	Asn
135 136	Tyr	Ala	Asn	Gly 100	Ser	Leu	Gly	Phe	Leu 105	Leu	Ala	Asp	Ala	Gly 110	Tyr	Asp
138 139	Val	Trp	Met 115	-	Asn	Ser	Arg	Gly 120		Thr	Trp	Ser	Arg 125	Arg	His	Lys
142		130				_	135	-		_		140	-	Phe		
	Met 145	Ala	Lys	Tyr	Asp	Leu 150	Pro	Gly	Val	Ile	Asp 155	Phe	Ile	Val	Asn	Lys 160
147 148	Thr	Gly	Gln	Glu	Lys 165	Leu	Tyr	Phe	lle	Gly 170	His	Ser	Leu	Gly	Thr 175	Thr
150 151	Ile	Gly	Phe	Val 180	Ala	Phe	Ser	Thr	Met 185		Glu	Leu	Ala	Gln 190	Arg	Ile
153 154	Lys	Met	Asn 195		Ala	Leu	Gly	Pro 200	Thr	Ile	Ser	Phe	Lys 205	Tyr	Pro	Thr
156 157	Gly	11e 210	Phe	Thr	Arg	Phe	Phe 215	Leu	Leu	Pro	Asn	Ser 220	Ile	Ile	Lys	Ala
	Val 225	Phe	Gly	Thr	Lys	Gly 230	Phe	Phe	Leu		Asp 235			Thr	Lys	Ile 240
162 163	Ala	Ser	Thr	Lys	11e 245	Cys	Asn	Asn	Lys	Ile 250	Leu	Trp	Leu	Ile	Cys 255	Ser
165 166	Glu	Phe	Met	Ser 260	Leu	Trp	Ala	Gly	Ser 265	Asn	Lys	Lys	Asn	Met 270	Asr.	Gln
168 169	Leu	Tyr	His 275	Ser	Asp	Glu	Phe	Arg 280	Ala	Tyr	Asp	Trp	Gly 285	Asn	Asp	Ala
171 172	Asp	Asn 290	Met	Lys	His	Tyr	Asn 295	Gln	Ser	His	Pro	Pro 300	He	Tyr	Asp	Leu
	Thr 305	Ala	Met	Lys	Val	Pro 310	Thr	Ala	lle	Trp	Ala 315	Gly	Gly	His	Asp	Val 320
177 178	Leu	Val	Thr	Pro	Gln 325	Asp	Val	Ala	Arg	11e 330	Leu	Pro	Gln	Ile	1.ys 335	Ser
180 181	Leu	His	Tyr	Phe 340	Lys	Leu	Leu	Pro	Asp 345	Trp	Asn	His	Phe	Asp 350	Phe	Val
183 184	Trp	Gly	Leu 355	Asp	Ala	Pro	Gln	Arg 360	Met	Tyr	Ser	Glu	11e 365	Ile	Ala	Leu
186 187	Met	Lys 370	Ala	Tyr	Ser											
	190 <210> SEQ ID NO: 3															
191 <211> LENGTH: 12348 192 <212> TYPE: DNA																

PATENT APPLICATION: US/10/038,854

DATE: 01/30/2003 TIME: 09:56:50

Input Set : A:\Cura-530.app

Output Set: N:\CRF4\01302003\J038854.raw

193 <213> ORGANISM: Homo sapiens 195 <400> SEQUENCE: 3 196 atggegagge ggeegeegtg geggggeete ggggaaeggt egacceeeat acteetgete 60 197 etteteetet ettigitees eeleagesag gaggagetig giggegigg geaccaggie 120 198 tgqgacccag gettagetge caetaegggg ceaagggege atateggtgg eggageetta 180 200 gageetatet tegtgggget eegagggaga aggeaaageg eeeggaatag tegagggeee 300 201 cctgagcage egaatgagga getggggatt gaacaeggeg tecagecatt gggcageege 360 202 gaacgagaga caggacaggg accagggtot, gtgttatact ggcgcccaga ggtctcctct 420 203 tgcgggcgga caggacettt gcaaagaggt agtetgteae caggggetet gteeteaggg 480 204 gtocoggget oggggaadag etegededte oottoagadt tittgatieg geaccaeggi 540 205 cccaaqcogy tgtcctccca goggaacgot gggacaggot cccgcaaaag agtgggcacc 600 206 gegegetget gtggggaatt atgggeaaea gggageaagg gteagggega gagageeaeg 660 207 acateeggag eagaaaggae ageeeeeegg eggaaetgte tteeagggge etegggatet 720 208 ggccccgage tggattcage accaegeacg gegaggaeag etectgeate aggttcagea 780 209 coccegegagt cteggaeage teeegageeg gegeeeaage geatgegete eeggggtete 840 210 ttdegetged getteeteed geagegeede gggeegegte eedegggadt deeggedegt 900 211 cctgaagcca ggaaagtaac ctcggcgaac cgggcacgct ttcgtcgcgc cgcaaaccgc 960 212 caccogcaqt ttocqcaqta caactaccaq acqctqqtqc cqqaqaatqa ggcaqcaggc 1020 213 accgcggtgc tacgcgtggt tgctcaggac ccggacgccg gcgaggccgg gcgcctagtc 1080 214 tactogotgg oggoacteat gaacagoogo togotggago tgttoagoat ogacoogoag 1140 215 ageggeetta teegtaegge ggeagetetg gaeegegaga geatggageg teactaeetg 1200 216 cqtqtqaccq cqcaqqacca cqqqtcqccq cqcctctcqq ccaccacgat ggtggccgtg 1260 217 acagtageog acegeaacga ceaetegeeg gtt.tttgage aagegeagta eegggagaee 1320 218 cttcgcgaga atgtggagga gggctaccct atcctgcagc tgcgtgccac tgacggcgac 1380 219 gegecceca aegecaaeet gegetaeege ttegtgggge egecagetge gegegetgea 1440 220 gctgccgccg ccttcgagat tgatccacgc tccggcctca tcagcaccag cggccgagtg 1500 221 gaccqcgagc acatggaaag ctatgagctq gtggtggaag ccagcgacca gggccaggaa 1560 222 cocgggccgc gctcggccac tgtgcgcgta cacataactg tgctagacga gaacgacaat 1620 223 getecteagt teagegagaa gegetaegtg gegeaggtge gegaggatgt gegeeeeeac 1680 224 acagtegtge tgegegteae ggeeactgae egggaeaagg aegeeaaegg attggtgeae 1740 225 tacaacatea teagtggeaa tageegtgga eaetttgeea tegacageet eaetggegag 1800 226 atccaggtgg tggcacctct ggacttcgag gcagagagag agtatgcctt gcgcatcagg 1860 227 gcgcaggatg ctggccggcc accgctgtcc aacaacacgg gcctggccag catccaggtg 1920 228 gtggadatca atgaccadat tectattttt gtdagdaege eetteeaagt tictgtettg 1980 229 qaaaatgoto oottgggtoa otoagtoato cacattoagg caglogatgo agaccatggg 2040 230 gagaatgoda qattggagta otoootaact ggtgtggdac otgatactoo titttgtgata 2100 231 aacaqcqcca ctqqctqqqt ctctqtgagt qqtcccctqq accqtqagtc tqtqgagcat 2160 232 tacttetttg gtgtggagge tegagaceat ggeteacece eactetetge eteageeagt 2220 233 qtcaccqtqa ctqtqctqqa cqttaatqac aat.cggcctg aqttcacaat gaaggagtac 2280 234 cacctacgae tgaatgagga tgeagetgtg ggeaceagtg tggteagegt gaeegeagta 2340 235 gaccqtqatq ccaacaqtqc catcagctac cagatcacaq gcggcaacac ccggaatcgc 2400 236 tttgccatca gcacccaggg qqgtqtgggt ctqqtgactc tggctctgcc actggactac 2460 237 aagcaggaac gctactteaa gctggtacta actgcatctg accgtgccct tcatgatcac 2520 238 tgctatgtgc acatcaacat cacagatgcc aacactcatc ggccggtctt tcaaagtgcc 2580 239 cactactdag (qaqtqtqaa tgaagatdgg ccaatgggta gcaccatagt ggtcatcagt 2640 240 geetetgatig afgaegrigg figagaatget egitatinanet ateficetigga ggaeaacetig 2700 241 edecagtice geatigatge agacteagga gecattacat tacaggeree attagactat 2760 242 gaggaccagg tgacctacac cotggctatic acagctoggg acaatggcat cocacagaag 2820

PATENT APPLICATION: US/10/038,854 TIME: 09:56:50

DATE: 01/30/2003

Imput Set : A:\Cura-530.app

Output Set: N:\CRF4\01302003\J038854.raw

2	43	gcagacacta	cttatgtgga	ggtgatggtc	aatgacgtga	atgacaatgc	tecacaattt	2880
2	44	gliggedteed	actatacaqu	gatggtatat	gaggatgccc	cacctttcac	cagtgtcctg	2940
- 2	245	cagateteag	ccactgaccg	ggatgctcat	gccaatggcc	gggtccagta	cactttccag	3000
2	46	aatggtgaag	atggggatgg	agattttacc	attgageeca	cct.ctggaat	tqtccqtaca	3060
				ggcagtat.ca				3120
				gactccagtc				3180
				agctgaggag				3240
				gatcact.gca				3300
				ggggaacatc				3360
				tgacctagac				3420
				tttggtcagc				3480
2	54	cagaatgaca	acadecetat	gctcaacaac	trocagatico	tetteaacaa	ctatgtatec	3540
				gtcgggcatt				3600
				ctcctttgag				3660
				gcgactcagc				3720
5	58	acctccatat	taataactat	cacagatggc	ctocacaged	tgacggcgca	atatatacta	3780
				ggagttgctg				3840
				gt.caccgctg				3900
	261	atactcacta	caccactaa	ggacgtette	atottoaaca	trcagaacga	cacagacgta	3960
5	62	gagaacacca	tactcaatat	gagtttctcg	acacteaact	cacatagaacga	caaaacaaac	
2	63	gggggeaceg	cctaattcaa	ctccgaggag	ct geaggage	antintacnt	acaccaaaca	4080
2	64	geegeaggge	ctcactccat	gctcgacgta	ctaccettca	ageegeacgt	atacctacaa	4140
				qaaatgcgtg				
	66	tteetageet	eggeeteeac	gctgttccga	cccatccade	ccatcactaa	cctacactac	4260
	67	cactacacac	cogaetteac	gggagacttt	tacaacaaca	agetegacet	ctactactcc	4320
2	68	aacccatoto	aceacaacaa	agcetgegeg	caacacaaaa	gaggetacae	atacatetae	4380
2	60	eacceaeget	tcaccagaga	ggactgcgag	ctagacacca	anaccaacca	ctacatacca	4440
2	70	ageat at acc	acaacagaga	cacctgcacc	dacdcdccca	acaacaactt	togotaccaa	4500
				cgagggcccg				
2	72	cccaattcat	teateatet	tegeggeetg	caacaacaat	tecacettae	actatecete	4620
				gagegggetg				
				actogtggct				
	75	dast coases	ccataatcaa	cccacagtt	ccagagagat	tgagtgacgg	gcaatggcat	4800
				caacaagccc				
				tgtgctaagc				
2	7Ω	cactttaata	ataaagttaa	caactactca	tacacaacta	ctaatataca	aacaagetee	4980
				gggccctctt				
2	200	aagaagcccc	tatoccataa	ggacttcatc	agetatatac	gracectoca	cattgatgg	5100
- 0	0.0	eggegagt ag	acatagaaa	ttttgtcgca	aataatggca	ccatagcaga	ctaccaaacc	5160
- 2	01	angetagagt	tttataaata	aggecect.ge	aacaacagta	acticiacta	ggaggggt gg	5220
2	102	aagctacact	actacaacta	ccctgtgggc	ttcaacaaca	aagactgtca	ggagagatagg	
- 2	0.0	ggcagcetca	gergegaerg	tggcaacggc	nengt anget	aagactgtca	apatapata	5340
	04	geceatece	tagastagta	cctggggctg	acactyaget	ggaactttgg	aagtgacatg	5400
				gccacacage				
2	07	atgratura	cycayyongg	gggctcgggc	acyccccccc	stataattat	agaggggtta	5520
_	00	conditionata	caguyacdag	gagereggge	ogract gaset	tacaggagga	aggaccaygig	5520
_	00	accyclageg	argyccggrg	tatggtctca	cygoeyyayı	acetattes	ggaggggggg	5640
6	90	guggugggga	gigageigea	gggdetgaag tootoagggt	g.aaagcagc	arat aaragg	addictates	5760
-	91	encadead, a	cadaddaddc	coccoagggs	e gustagus	y accessign	ggugaggese	5 (1)1)

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/038,854

DATE: 01/30/2003 TIME: 09:56:51

Input Set : A:\Cura-530.app

Output Set: N:\CRF4\01302003\J038854.raw

L:36 M:271 C: Current Filing Date differs, Replaced Current Filing Date